

Far Eastern Entomologist

Number 396: 17-44

ISSN 1026-051X

December 2019

<https://doi.org/10.25221/fee.396.3>

<http://zoobank.org/References/FE1F63DC-55A9-4B48-BF26-B500BE9A0B3A>

THE SPECIES-GROUP NAMES OF BEES (HYMENOPTERA: APOIDEA, APIFORMES) DESCRIBED FROM CRIMEA, NORTH CAUCASUS, EUROPEAN PART OF RUSSIA AND URAL. PART III. FAMILIES MELITTIDAE AND APIDAE (EXCEPT *BOMBUS LATREILLE* AND *APIS* LINNAEUS)

M. Yu. Proshchalykin^{1*)}, Yu. V. Astafurova²⁾, T. V. Levchenko³⁾, A. S.
Shlyakhtenok⁴⁾, M. Schwarz⁵⁾

1) Federal Scientific Center of the East Asia Terrestrial Biodiversity, Far East Branch of the Russian Academy of Sciences, Vladivostok, 690022, Russia. *Corresponding author. E-mail: proshchalikin@biosoil.ru

2) Zoological Institute, Russian Academy of Sciences, St. Petersburg, 199034, Russia.

3) State Darwin Museum, Moscow, 117292, Russia.

4) Scientific and Practical Center of the National Academy of Sciences on bioresources, Minsk, 220072, Republic of Belarus.

5) A-4052, Ansfelden, Austria.

Summary. An annotated list of 95 species-group names of bees from 17 genera of families Melittidae и Apidae (except *Bombus* and *Apis*) described by 22 authors from Crimea, North Caucasus, European part of Russia and Ural in 1848–2017 is given. Of them 47 species are valid. For each taxon the data about the types and their depository, current taxonomic status and distribution are given. Lectotypes are designated for 24 nominal taxa: *Anthophora albifrons* Eversmann, 1852, *A. atricilla* Eversmann, 1846, *A. borealis* Morawitz, 1864, *A. deserticola* Morawitz, 1872, *A. nigricornis* Morawitz, 1872, *Crocisa affinis* Morawitz, 1874, *Epeolus luctuosus* Eversmann, 1852, *Eucera caspica* Morawitz, 1874, *Macrocera mediocris* Eversmann, 1852, *Melecta eversmanni* Radoszkowski, 1893, *Nomada dubia* Eversmann, 1852, *N. lineola rufomaculata* Łoziński, 1922, *N. lutea* Eversmann, 1852, *N. pastoralis* Eversmann, 1852, *N. rubricosa* Eversmann, 1852, *Pasites fasciata* Eversmann, 1852, *P. schottii* Eversmann, 1852, *Phileremus abdominalis* Eversmann, 1852, *Ph. hirsutulus* Eversmann, 1852, *Saropoda fulva* Eversmann, 1852, *Tetralonia basalis* Morawitz, 1870, *T. nana* Morawitz, 1874, *T. radoszkowskyi* Morawitz, 1872, and *T. velutina* Morawitz, 1874. A new synonymy is proposed: *Nomada mitaii* Proshchalykin, 2010 = *N. obscuriceps* Schwarz et Levchenko, 2017, **syn. n.**

Key words: Anthophila, fauna, distribution, taxonomy, synonymy, Palaearctic Region.

М. Ю. Прощалыкин, Ю. В. Астафурова, Т. В. Левченко, А. С. Шляхтенок, М. Шварц. Таксоны пчёл (Hymenoptera: Apoidea, Apiformes), описанные из Крыма, Северного Кавказа, европейской части России и Урала. Часть III. Семейства Melittidae и Apidae (кроме *Bombus Latreille* и *Apis Linnaeus*) // Дальневосточный энтомолог. 2019. N 396. C. 17-44.

Резюме. Приведен аннотированный список 95 названий видовой группы пчел из 17 родов семейств Melittidae и Apidae (за исключением *Bombus* и *Apis*), описанных 22 авторами из Крыма, Северного Кавказа, европейской части России и Урала в 1848–2017 гг. Из них 47 таксонов являются валидными. Для каждого таксона даны сведения о типе и месте его хранения, современном таксономическом положении и распространении. Обозначены лектотипы для 24 таксонов: *Anthophora albifrons* Eversmann, 1852, *A. atricilla* Eversmann, 1846, *A. borealis* Morawitz, 1864, *A. deserticola* Morawitz, 1872, *A. nigricornis* Morawitz, 1872, *Crocisa affinis* Morawitz, 1874, *Epeolus luctuosus* Eversmann, 1852, *Eucera caspica* Morawitz, 1874, *Macrocerca mediocris* Eversmann, 1852, *Melecta eversmanni* Radoszkowski, 1893, *Nomada dubia* Eversmann, 1852, *N. lineola rufomaculata* Loziński, 1922, *N. lutea* Eversmann, 1852, *N. pastoralis* Eversmann, 1852, *N. rubricosa* Eversmann, 1852, *Pasites fasciata* Eversmann, 1852, *P. schottii* Eversmann, 1852, *Phileremus abdominalis* Eversmann, 1852, *Ph. hirsutulus* Eversmann, 1852, *Saropoda fulva* Eversmann, 1852, *Tetralonia basalis* Morawitz, 1870, *T. nana* Morawitz, 1874, *T. radoszkowskyi* Morawitz, 1872, and *T. velutina* Morawitz, 1874. Установлена новая синонимия: *Nomada mitaii* Proshchalykin, 2010 = *N. obscuriceps* Schwarz et Levchenko, 2017, **syn. n.**

INTRODUCTION

This paper continues the study of the bees described from Russia (Proshchalykin & Lelej 2013; Proshchalykin 2014a, b; Proshchalykin & Astafurova 2016; Proshchalykin *et al.* 2017). The goal of the present paper is to review of the bees of families Melittidae and Apidae (except *Bombus* Latreille and *Apis* Linnaeus) described from European part of Russia including Crimea, North Caucasus, and Ural. During 170 years (1848–2017) of extensive work by 22 entomologists 95 nominal names have been proposed for 47 species of bees of families Melittidae and Apidae (except *Bombus* and *Apis*) from from this area. Most taxa have been described by E. Eversmann (27 species, 13 of them are valid), F. Morawitz (25/16), and O. Radoszkowski (6/3).

Very often, the type series of Eversmann's species consisted of several taxa (sometimes belonging to different genera or even families). In Eversmann's (1852) work about bees, the species descriptions are very short and without illustrations. The type specimens of these species currently deposited in several museums in Krakow, Berlin, and St. Petersburg. In this case, the designation of a lectotype is necessary according to article 74 of Code (ICZN 1999) as was done in the previous papers (Proshchalykin & Astafurova 2016; Proshchalykin *et al.* 2017; Proshchalykin & Müller 2019).

Acronyms for the collections where specimens are deposited as follows: IEEK – Institute for Evolutionary Ecology, National Academy of Sciences of Ukraine, Kiev, Ukraine; IZKP – Institute of Systematic and Experimental Zoology, Polish Academy of Sciences, Krakow, Poland; IZKU – I.I. Schmalgausen Institute of Zoology of National Academy of Sciences of Ukraine, Kiev, Ukraine; MNHU – Museum für Naturkunde an der Humboldt Universität zu Berlin, Germany; NHMW – Naturhistorisches Museum, Vienna, Austria; PCMS – private collection of Maximilian Schwarz, Ansfelden, Austria; ZISP – Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia; ZMH – Zoological Museum of the University of Helsinki, Helsinki, Finland.

The classification of bees follows Michener (2007). A detailed distribution of species follows Proshchalykin & Astafurova (2017) and Levchenko *et al.* (2017a). If nominal taxon is synonymised, the distribution is given for valid species which includes this synonym.

LIST OF SPECIES-GROUP NOMINAL NAMES

Family Melittidae Subfamily Dasypodainae

Dasypoda argentata cinerascens Friese, 1901

Dasypoda argentata var. *cinerascens* Friese, 1901: 141, ♀ (syntypes: ♀♀, “Hung. Russ.” [Hungary and Russia], MNHU).

CURRENT STATUS. A junior synonym of *Dasypoda argentata* Panzer, 1809 (Warncke 1973: 120).

DISTRIBUTION. Russia: Crimea, North Caucasus, south of European part, Ural; Europe, North Africa, Caucasus, Turkey, Lebanon, Iran.

Dasypoda braccata Eversmann, 1852

Dasypoda braccata Eversmann, 1852: 55, ♀, nec ♂ (lectotype: ♀, designated by Radchenko & Pesenko, 1989: 119, “Spask. [Spasskoe, Orenburg Prov., Russia], Jul”, ZISP).

CURRENT STATUS. Valid species (Radchenko & Pesenko 1989).

DISTRIBUTION. Russia: North Caucasus, European part, Ural; Europe, Turkey, Kazakhstan.

Dasypoda hirtipes minor Morawitz, 1874

Dasypoda hirtipes var. *minor* Morawitz, 1874: 157 [sex not indicated in publication] (type locality: Derbent [Dagestan Rep., Russia], probably lost).

CURRENT STATUS. Nomen dubium (Radchenko 2016).

REMARK. The type material of this taxon is untraceable and the description too poor for an unequivocal recognition. Probably *Dasypoda hirtipes* var. *minor* Morawitz, 1874 is a senior synonym of *D. morawitzi* Radchenko, 2016 (Proshchalykin & Astafurova 2017).

Dasypoda morawitzi Radchenko, 2016

Dasypoda morawitzi Radchenko, 2016: 493–503, ♀, ♂ (holotype: ♂, Ukraine, Kherson Region, Black Sea Biosphere Reserve, Ivano-Rybalchanskiy plot, leg. A. Kotenko, IIEK; paratypes: Russia: North Caucasus, European part, Ural; Kazakhstan).

CURRENT STATUS. Valid species (Radchenko 2016).

DISTRIBUTION. Russia: Crimea, North Caucasus, south of European part, Ural; Europe, Turkey, Kazakhstan.

Dasypoda nemoralis Baer, 1853

Dasypoda nemoralis Baer, 1853: 70, ♀, ♂ (syntypes: ♀♀, ♂♂, “In nemoribus ad ripam sinistram fluvii Oka, prope Kaschira, capta” [Moscow Prov.], probably lost).

CURRENT STATUS. A junior synonym of *Dasypoda hirtipes* (Fabricius, 1793) (Michez et al. 2004: 865).

DISTRIBUTION. Russia: Crimea, North Caucasus, European part, Siberia, Far East; Europe, North Africa, Caucasus, Turkey, Iran, Kazakhstan, Mongolia, North-Eastern China.

Dasypoda villipes Eversmann, 1852

Dasypoda villipes Eversmann, 1852 (nom. praeocc., nec Lepeletier de Saint-Fargeau 1841): 57, ♀ (lectotype: ♀, designated by Radchenko & Pesenko, 1989: 119, “Cauc.” [Caucasus], ZISP).

CURRENT STATUS. Objectively invalid name, junior homonym of *Dasypoda villipes* Lepeletier de Saint-Fargeau 1841, replaced by *D. thoracica* Baer, 1853 (Radchenko & Pesenko 1989) which synonymized under *D. argentata* Panzer, 1809.

DISTRIBUTION. See above *Dasypoda argentata cinerascens*.

Subfamily Melittinae

***Melitta budashkini* Radchenko et Ivanov, 2012**

Melitta budashkini Radchenko et Ivanov in Michez et al., 2012: 58, ♀, ♂ (holotype: ♂, Crimea Rep., Feodosia, Cape Chauda, 16.IX.2011, leg. Yu. Budashkin, IZKU).

CURRENT STATUS. Valid species (Michez et al. 2012).

DISTRIBUTION. Russia: Crimea.

***Melitta udmuratica* Sitzikov, 1986**

Melitta udmuratica Sitzikov, 1986: 108, ♀, ♂ (holotype: ♂, Udmurtia Rep., Kel'mez', 24.VII 1985, leg. A. Sitzikov, ZISP).

CURRENT STATUS. Valid species (Michez et al. 2012).

DISTRIBUTION. Russia: east of European part, Ural; Eastern Europe.

Family Apidae Subfamily Nomadinae

***Ammobates setosus* Morawitz, 1870**

Ammobates setosus Morawitz, 1870: 309–311, ♀, ♂ (syntypes: ♀♀, ♂♂, “Im Gouvernement von Saratow und in der Krym” [Saratov Prov., Crimea Rep., Russia], probably lost).

CURRENT STATUS. A junior synonym of *Ammobates vinctus* Gerstäcker, 1869 (Dalla Torre 1891: 151).

DISTRIBUTION. Russia: North Caucasus, European part, Ural; Europe, North Africa, Turkey, Kazakhstan.

REMARK. The syntypes of this species have not been found in ZISP and IZKP.

***Epeolus luctuosus* Eversmann, 1852**

Epeolus luctuosus Eversmann, 1852 (nom. praeocc., nec Spinola, 1851): 101, ♀, ♂ (lectotype: ♀, designated here, “Spask” [Spasskoe, Orenburg Prov., Russia] // к. Эверсманна [coll. Eversmann] // Lectotypus *Epeolus luctuosus* Eversmann, 1852, design. Proshchalykin & Astafurova, 2017; ZISP).

CURRENT STATUS. Objectively invalid name, junior homonym of *Epeolus luctuosus* Spinola, 1851, replaced by *Epeolus tristis* Smith, 1854, currently in the genus *Triepelous* Robertson, 1901 (Rightmyer 2008: 124).

DISTRIBUTION. Russia: European part, Ural, Western Siberia; Europe, Turkey, Kazakhstan.

REMARK. The species was described from the specimens of both sexes collected in “provinciis Casanensi et Orenburgensi”. There are three specimens (2 ♀ and ♂) in ZISP and two males (one without metasoma) in IZKP from this locality, which corresponds to the original description of Eversmann. One of this specimens (female) is designated here as a lectotype of *Epeolus luctuosus* Eversmann (Fig. 1).

***Epeorus minutus* Radoszkowski, 1888**

Epeorus minutus Radoszkowski, 1888: 336, ♂ (syntypes: ♂♂, “Gouvernement d'Orenbourg; steppes de Kirghises”, ?IZKP).

CURRENT STATUS. Nomen dubium (Bogusch & Hadrava 2018).

REMARK. The type material of this taxon is untraceable and the description too poor for an unequivocal recognition.

***Epeorus pilosus* Bischoff, 1930**

Epeorus pilosus Bischoff, 1930: 8–10 (key), ♀, ♂ (holotype: ♀, “Rossitten” [Rybachi, Kalingrad Prov., Russia], MNHU).

CURRENT STATUS. A junior synonym of *Epeorus alpinus* Friese, 1893 (Bogusch & Hadrava 2018: 6).

DISTRIBUTION. Russia: European part, Eastern Siberia; Europe.

***Epeorus productulus* Bischoff, 1930**

Epeorus productulus Bischoff, 1930: 4, ♀, ♂ (holotype: ♀, “Sarepta” [Volgograd, Russia], MNHU).

CURRENT STATUS. Valid species (Bogusch & Hadrava 2018).

DISTRIBUTION. Russia: south of European part; Europe.

***Epeorus tarsalis* Morawitz, 1874**

Epeorus tarsalis Morawitz, 1874: 182–183, ♂ (holotype: ♂, Derbent [Dagestan Rep., Russia], probably lost).

CURRENT STATUS. Valid species (Bogusch & Hadrava 2018).

DISTRIBUTION. Russia: North Caucasus, south of European Part, Eastern Siberia, Far East; Europe, Mongolia, Korean Peninsula, Japan.

REMARK. The syntypes of this species have not been found in ZISP and IZKP.

***Epeorus transitorius* Eversmann, 1852**

Epeorus transitorius Eversmann, 1852: 102, [sex not indicated in publication] (syntypes: ♀♀, “in provincia Orenburgensi australiore, circa Indersk, in promontoriis Uralensibus australibus et in terris transuralensibus”, IZKP).

CURRENT STATUS. Valid species (Bogusch & Hadrava 2018).

DISTRIBUTION. Russia: south of European part, Ural; Europe, Georgia, Iran, Turkmenistan, Uzbekistan, Kazakhstan.

REMARK. The species was described from the specimens without sex definition collected in several localities of Ural and trans-Ural territories of Russia and Kazakhstan (“in provincia Orenburgensi australiore, circa Indersk, in promontoriis Uralensibus australibus et in terris transuralensibus”). There are only two females in IZKP from these localities (“Spask” [Spasskoe, Orenburg Prov., Russia] and “Camp. Kirg.” [Kazakhstan]), which correspond to the original description of Eversmann. But these specimens are in very poor condition (specimen labeled “Spask” without metasoma and specimen labeled “Camp. Kirg.” without antennae), and required additional revision.

***Epeorus variegatus rossicus* Friese, 1925**

Epeorus variegatus var. *rossicus* Friese, 1925: 30, ♀ (holotype: “Central-Rußland (Smolensk)”, MNHU).

CURRENT STATUS. A junior synonym of *Epeolus variegatus* (Linnaeus, 1758) (Ascher & Pickering 2019).

DISTRIBUTION. Russia: North Caucasus, European part, Ural, Siberia; Europe, North Africa, Caucasus, Turkey, Central Asia.

***Nomada abberans* Eversmann, 1852**

Nomada abberans Eversmann, 1852: 93 [sex not indicated in publication] (type locality: “in provincia Orenburgensi”, probably lost).

CURRENT STATUS. A junior synonym of *Nomada nobilis* Herrich-Schäffer, 1839 (Alexander & Schwarz 1994: 255).

DISTRIBUTION. Russia: Crimea, European part, Ural; Europe, North Africa, Armenia, Azerbaijan, Turkey, Israel.

REMARK. The syntypes of this species have not been found in ZISP and IZKP.

***Nomada bifida moeschleri* Alfken, 1913**

Nomada bifida var. *möschleri* Alfken, 1913: 147, ♀ (holotype: ♀, “Rossitten [Rybachiysk, Kalingrad Prov., Russia], 11.V.1911“, MNUH).

CURRENT STATUS. Valid species as *Nomada moeschleri* Alfken, 1913 (Alexander & Schwarz 1994).

DISTRIBUTION. Russia: European part, Ural, Eastern Siberia; Europe, Azerbaijan, Uzbekistan, Kazakhstan.

***Nomada bifida orenburgensis* Łoziński, 1922**

Nomada bifida var. *orenburgensis* Łoziński, 1922: 111, ♀ (syntypes: ♀♀, “Europa orientalis-meridionalis, circa Orenburg” [Orenburg Prov.], probably lost).

CURRENT STATUS. Valid subspecies as *Nomada ruficornis orenburgensis* Łoziński, 1922 (Alexander & Schwarz 1994).

DISTRIBUTION. Russia: Crimea, European part, Siberia, Far East; Europe, Azerbaijan, Turkey, Uzbekistan, Kazakhstan.

***Nomada bimaculata* Eversmann, 1852**

Nomada bimaculata Eversmann, 1852: 99, [sex not indicated in publication] (type locality: “in prov. Orenburg. et Astrachanensi”, probably lost).

CURRENT STATUS. Objectively invalid name, junior homonym of *Nomada bimaculata* Schilling, 1849; a junior synonym of *Nomada basalis* Herrich-Schäffer, 1839 (Alexander & Schwarz 1994: 255).

DISTRIBUTION. Russia: Crimea Russia, south of European part; Europe, North Africa, Armenia, Turkey, Syria, Palestine, Israel, Iraq, Iran, Turkmenistan, Kazakhstan.

REMARK. The syntypes of this species have not been found in ZISP and IZKP.

***Nomada cincticornis* Nylander, 1848**

Nomada cincticornis Nylander, 1848: 182–183, ♀, ♂ (lectotype: ♀, designated by Nilsson 2007: 176, “Småland, Sweden”, ZMH).

CURRENT STATUS. Junior synonym of *Nomada armata* Herrich-Schäffer, 1839 (Alexander & Schwarz 1994: 253).

DISTRIBUTION. Russia: Crimea, European part, Ural; Europe, Georgia, Azerbaijan.

REMARK. The species was described from the specimens of both sexes collected in “Scania”, “Smolandia”, and “Karelia” [Russia]. There are only two females in ZMH from “Smolandia”. One of these specimens was designated as lectotype by L. Nilsson (2007).

***Nomada cinnaberina* Morawitz, 1871**

Nomada cinnaberina Morawitz, 1871: 330–331, ♀ (lectotype: ♀, designated by Schwarz 1987: 240, “UdSSR: Saratov (Sarepta)” [Volgograd, Russia], ZISP).

CURRENT STATUS. A junior synonym of *Nomada stigma* Fabricius, 1804 (Schwarz 1967: 309).

DISTRIBUTION. Russia: North Caucasus, Crimea, European part, Siberia; Europe, North Africa, Armenia, Azerbaijan, Turkey, Cyprus, Uzbekistan, Kazakhstan.

***Nomada distinguenda* Morawitz, 1874**

Nomada distinguenda Morawitz, 1874: 181, ♀, ♂ (lectotype: ♀, designated by Schwarz 1980: 10, “USSR: Derbent” [Dagestan Rep., Russia], ZISP).

CURRENT STATUS. Valid species (Alexander & Schwarz 1994).

DISTRIBUTION. Russia: North Caucasus, Crimea, European part; Europe, North Africa, Caucasus, Turkey, Syria, Afghanistan, Turkmenistan.

***Nomada dubia* Eversmann, 1852**

Nomada dubia Eversmann, 1852 (nec Schmiedeknecht, 1882): 94, [sex not indicated in publication] (lectotype: ♂, designated here, golden circle // Spask [Spasskoe, Orenburg Prov., Russia], 26.VI // Radoszkowski, Apidae, L. 59 (Eversmann) // determ. Łozinski N. solidaginis v. *dubia* Ev., Typus, ♂ // Lectotypus, *Nomada dubia* Ev., ♂, M. Schwarz, 1966; IZKP).

CURRENT STATUS. Valid species (Alexander & Schwarz 1994).

DISTRIBUTION. Russia: Ural; Western Asia.

REMARK. The species was described from the specimens without sex definition collected in “in promontoriis Uralensibus australibus”. There are two specimens (♀ and ♂) in IZKP from this locality (“Spask” [Orenburg Prov., Spasskoe]), which corresponds to the original description of Eversmann. One specimen (male) previously was designated as Eversmann’s type by P. Łoziński in 1922 and M. Schwarz in 1966 but never published (Fig. 2).

***Nomada erythrocephala* Morawitz, 1871**

Nomada erythrocephala Morawitz, 1871: 331–332, ♀♀ (lectotype: ♀, designated by Schwarz 1987: 240, “UdSSR: Saratov (Sarepta)” [Volgograd, Russia], ZISP).

CURRENT STATUS. Valid species (Alexander & Schwarz 1994).

DISTRIBUTION. Russia: North Caucasus, south of European part; Europe, Armenia, Turkey, Cyprus.

***Nomada fennica* Alfken, 1924**

Nomada fennica Alfken, 1924: 35, ♀, ♂ (syntypes: ♀♀, ♂♂, Rautu–Sosnovo (Leningrad Prov., Russia), Lohja (Finland), MNHU).

CURRENT STATUS. A junior synonym of *Nomada rufipes* Fabricius, 1793 (Alexander & Schwarz 1994: 243).

DISTRIBUTION. Russia: North Caucasus, European part, Siberia, Far East; Europe, North Africa, Kazakhstan.



Figs 1–24. Labels of the lectotypes designated in this paper. 1 – *Epeolus luctuosus* Eversmann; 2 – *Nomada dubia* Eversmann; 3 – *N. lineola rufomaculata* Łoziński; 4 – *N. lutea* Eversmann; 5 – *N. pastoralis* Eversmann; 6 – *N. rubricosa* Eversmann; 7 – *Psites fasciata* Eversmann; 8 – *P. schottii* Eversmann; 9 – *Phileremus abdominalis* Eversmann; 10 – *Ph. hirsutulus* Eversmann; 11 – *Anthophora albifrons* Eversmann; 12 – *A. atricilla* Eversmann; 13 – *A. borealis* Morawitz; 14 – *A. deserticola* Morawitz; 15 – *A. nigricornis* Morawitz; 16 – *Crocisa affinis* Morawitz; 17 – *Eucera caspica* Morawitz; 18 – *Macrocera mediocris* Eversmann; 19 – *Melecta eversmanni* Radoszkowski; 20 – *Saropoda fulva* Eversmann; 21 – *Tetralonia basalis* Morawitz; 22 – *T. nana* Morawitz; 23 – *T. radoszkowskyi* Morawitz; 24 – *T. velutina* Morawitz.

***Nomada fusca* Schwarz, 1986**

Nomada fusca Schwarz, 1986: 434–438, ♀, ♂ (holotype: ♀, Finland, Ta, Hattula, 7.07.1958 [coll. M. Schwarz], paratypes: Russia: “Kivennapa” [Pervomayskoe, Leningrad Prov.], “Petersburg” [St. Petersburg,], ZISP).

CURRENT STATUS. Valid species (Alexander & Schwarz 1994).

DISTRIBUTION. Russia: European part, Siberia, Far East; north Europe, Japan.

***Nomada fuscicornis* Nylander, 1848**

Nomada fuscicornis Nylander, 1848: 185–186, ♀, ♂ (syntypes: ♀♀, ♂♂, “E paroecia Karaliae australis Sakkola” [Gromovo, Leningrad Prov., Russia], ZMH).

CURRENT STATUS. Valid species (Alexander & Schwarz 1994).

DISTRIBUTION. Russia: North Caucasus, European part, Western Siberia; Europe.

***Nomada immaculata* Morawitz, 1874**

Nomada immaculata Morawitz, 1874: 179, ♀, ♂ (lectotype: ♂, designated by Schwarz 1980: 9, “USSR: Derbent” [Dagestan Rep., Russia], ZISP).

CURRENT STATUS. Valid species (Alexander & Schwarz 1994).

DISTRIBUTION. Russia: North Caucasus, south of European; Europe, Armenia, Cyprus, Afghanistan, Pakistan.

***Nomada lineola erubescens* Friese, 1921**

Nomada lineola var. *erubescens* Friese, 1921: 251, ♀ (syntypes: ♀♀, “Königsberg. Deutschland” [Kaliningrad, Russia], MNHU).

CURRENT STATUS. A junior synonym of *Nomada fulvicornis* Fabricius, 1793 (Alexander & Schwarz 1994: 248).

DISTRIBUTION. Russia: North Caucasus, Crimea, European part, Ural, Siberia, Far East; Europe, North Africa, Caucasus, Turkey, UAE, Pakistan, Turkmenistan, Uzbekistan, Japan.

***Nomada lineola nigrina* Łoziński, 1922**

Nomada lineola var. *nigrina* Łoziński, 1922: 99, ♀ (holotype: ♀, “Kas.” [Kasan, Tatarstan Rep., Russia], IZKP).

CURRENT STATUS. A junior synonym of *Nomada fulvicornis* Fabricius, 1793 (Alexander & Schwarz 1994: 248).

DISTRIBUTION. See above *Nomada lineola erubescens*.

***Nomada lineola rufomaculata* Łoziński, 1922**

Nomada lineola var. *rufomaculata* Łoziński, 1922: 100, ♀ (lectotype: ♀, designated here, Orb. [Orenburg, Russia] // *Nomada* n. sp., B.M.. 6. // 190. // Radoszkowski, Apidae. L. 36. (Eversmann) // Lectotypus, ♀, *Nomada lineolata rufomaculata* Łz., M. Schwarz, 1966; IZKP).

CURRENT STATUS. A junior synonym of *Nomada fulvicornis* Fabricius, 1793 (Alexander & Schwarz 1994: 248).

DISTRIBUTION. See *Nomada lineola erubescens*.

REMARK. The species was described from the females collected in “Europa orientalis-meridionalis, circa Orenburg”. There are three specimens (females) in IZKP from this locality (Orenburg Prov.), which corresponds to the original description of Łoziński. One female previously was designated as lectotype of *Nomada lineola rufomaculata* Łoziński by M. Schwarz in 1966 but never published (Fig. 3).

***Nomada lutea* Eversmann, 1852**

Nomada lutea Eversmann, 1852: 96, [sex not indicated in publication] (lectotype: ♂, designated here, Spask [Spasskoe, Orenburg Prov., Russia], June // *lutea* Evm. // Radoszkowski, Apidae. L. 131 (Eversmann) // Lectotypus, ♂, *Nomada lutea* Eversmann, 1852, design. M. Proshchalykin et al., 2019; IZKP).

CURRENT STATUS. Valid species (Alexander & Schwarz 1994).

DISTRIBUTION. Russia: Crimea, Ural; Kazakhstan.

REMARK. The species was described from the specimens without sex definition collected in “in promontoriis Uralensib. australib.”. There is one male in IZKP from this locality (“Spask” [Orenburg Prov., Spasskoe]), which correspond to the original description of Eversmann. This specimen is designated here as a lectotype of *Nomada lutea* Eversmann (Fig. 4).

***Nomada mutabilis* Morawitz, 1871**

Nomada mutabilis Morawitz, 1871: 328–330, ♀ (lectotype: ♀, designated by Schwarz 1987: 240, “UdSSR: Saratov (Sarepta)” [Volgograd, Russia], ZISP).

CURRENT STATUS. Valid species (Alexander & Schwarz 1994).

DISTRIBUTION. Russia: Crimea, European part, Ural, Eastern Siberia; Europe, North Africa, Georgia, Azerbaijan, Turkey, Iran, Turkmenistan, Kyrgyzstan, Kazakhstan, Nepal, India.

***Nomada obscuriceps* Schwarz et Levchenko, 2017**

Nomada obscuriceps Schwarz et Levchenko in Levchenko et al., 2017b: 95–98, ♀, ♂ (holotype: ♀, Russia, Irkutsk Prov., Irkutsk, 9.VI.1979, leg. M. Kraus, PCMS), examined.

CURRENT STATUS. Junior synonym of *Nomada mitaii* Proshchalykin in Proshchalykin & Lelej 2010 = *Nomada obscuriceps* Schwarz et Levchenko in Levchenko et al. 2017, **syn. n.**

DISTRIBUTION. Russia: Eastern Siberia, Far East; Mongolia.

REMARK. Holotype (female) and paratypes (female and male) from Irkutsk in PCMS and ZISP are identical to *N. mitaii* Proshchalykin, but the paratype female from Izhevsk in ZISP belongs to another (probably new) species.

***Nomada pallidenotata* Schmiedeknecht, 1882**

Nomada pallidenotata Schmiedeknecht, 1882: 53 (key), 140–141, ♂ (lectotype: ♂, designated by Schwarz & Gusenleitner 2015: 1027, “Sarepta” [Volgograd, Russia], NHMW).

CURRENT STATUS. A junior synonym of *Nomada fulvicornis* Fabricius, 1793 (Schwarz & Gusenleitner 2015: 1027).

DISTRIBUTION. See above *Nomada lineola erubescens*.

***Nomada pastoralis* Eversmann, 1852**

Nomada pastoralis Eversmann, 1852: 101, ♀ (lectotype: ♀, designated here, golden circle // Spask [Spasskoe, Orenburg Prov., Russia], 30.VI // *Nomada pastoralis* Evm. // Radoszkowski. L. 136 (Eversmann) // Lectotypus, ♀, *Nomada pastoralis* Ev., M. Schwarz, 1966; IZKP).

CURRENT STATUS. Valid species (Alexander & Schwarz 1994).

DISTRIBUTION. Russia: Ural; south Europe, Turkey.

REMARK. The species was described from the females collected in “provincia Orenburgensi”. There are two specimens (females) in IZKP from this locality (Orenburg Prov.), which corresponds to the original description of Eversmann. One female previously was designated as lectotype of *Nomada pastoralis* Eversmann by M. Schwarz in 1966 but never published (Fig. 5).

***Nomada pilosa* Schwarz et Gusenleitner, 2017**

Nomada pilosa Schwarz & Gusenleitner, 2017: 979–983, ♀, ♂ (holotype: ♀, Turkey: Konya, 5.06.1967, leg. J. Gusenleitner; PCMS; paratypes: ♀♀, ♂, Russia: Proletarskiy, Rostov Prov.; ♀, Sevastopol, Crimea Rep., ZISP).

CURRENT STATUS. Valid species (Schwarz & Gusenleitner 2017).

DISTRIBUTION. Russia: Crimea, south of European part; Turkey.

***Nomada quadrispinosa* Mocsáry, 1901**

Nomada quadrispinosa Mocsáry in Mocsáry & Szépligeti 1901: 168–169, ♀ (holotype: ♀, “Russia: Saratow” [Saratov, Russia], probably lost).

CURRENT STATUS. Nomen dubium (Alexander & Schwarz 1994: 258).

REMARK. The type material of this taxon is untraceable and the description too poor for an unequivocal recognition.

***Nomada robusta* Morawitz, 1871**

Nomada robusta Morawitz, 1871: 326–328, ♀, ♂ (lectotype: ♀, designated by Schwarz 1987: 238, “UdSSR: Saratov (Sarepta)” [Volgograd, Russia], ZISP).

CURRENT STATUS. Valid subspecies *Nomada fulvicornis robusta* Morawitz, 1871 (Alexander & Schwarz 1994: 248).

DISTRIBUTION. Russia: European part; Europe.

***Nomada rubricosa* Eversmann, 1852**

Nomada rubricosa Eversmann, 1852: 100 [sex not indicated in publication] (lectotype: ♀, designated here, golden circle // Spask [Spasskoe, Orenburg Prov., Russia], 17.VII // Radoszkowski, Apidae. L. 129 (Eversmann) // detrerm. Łozinski, *N. rubricosa* Ev., ♀, Typus // Lectotypus, *Nonada rubricosa* Ev., ♀, M. Shwarz, 1966; IZKP).

CURRENT STATUS. Valid species (Alexander & Schwarz 1994).

DISTRIBUTION. Russia: European part, Ural; Kazakhstan.

REMARK. The species was described from the specimens without sex definition collected in “in promontoriis Uralensibus australibus et in provincia Orenburgensi australi, circa Indersk”. There are three females in IZKP from this locality (“Spask” [Orenburg Prov., Spasskoe]), which correspond to the original description of Eversmann. One female previously was designated as lectotype of *Nomada rubricosa* Eversmann by M. Schwarz in 1966 but never published (Fig. 6).

***Nomada thersites* Schmiedeknecht, 1882**

Nomada thersites Schmiedeknecht, 1882: 227–228, ♀, ♂ (lectotype: ♀, designated by Schwarz & Gusenleitner, 2015: 1032, “Sarepta” [Volgograd, Russia], NHMW).

CURRENT STATUS. Valid species (Alexander & Schwarz 1994).

DISTRIBUTION. Russia: south of European part; Europe, Cyprus, Israel, Kyrgyzstan, Kazakhstan.

***Nomada transitoria* Schmiedeknecht, 1882**

Nomada transitoria Schmiedeknecht, 1882: 222, ♀ (lectotype: ♀, designated by Schwarz & Gusenleitner 2015: 1032, “Sarepta” [Volgograd, Russia], MNHU).

CURRENT STATUS. A junior synonym of *Nomada corecyraea* Schmiedeknecht, 1882 (Schwarz & Gusenleitner 2015: 1032).

DISTRIBUTION. Russia: south of European part; Europe, Azerbaijan, Turkey.

***Nomada zichyana* Mocsáry, 1901**

Nomada zichyana Mocsáry in Mocsáry & Szépligeti 1901: 169, ♀ (holotype: ♀, “Rossia: Saratow” [Saratov, Russia], probably lost).

CURRENT STATUS. Nomen dubium (Alexander & Schwarz 1994: 258).

REMARK. The type material of this taxon is untraceable and the description too poor for an unequivocal recognition.

***Nomada zonata sarmatica* Stoeckhert, 1941**

Nomada zonata sarmatica Stoeckhert, 1941: 1086–1087, ♀♀ (holotype: ♀, “bei Walouyki im früheren Gouvernement Woronesch (Südrussland)” [Valuyki, Belgorod Prov., Russia], NHMW).

CURRENT STATUS. Valid species (Alexander & Schwarz 1994).

DISTRIBUTION. Russia: European part, Ural, Eastern Siberia; Europe, North Africa, Armenia, Azerbaijan, Turkey, Iran, Turkmenistan, Uzbekistan, Kazakhstan.

***Pasites fasciata* Eversmann, 1852**

Pasites fasciata Eversmann, 1852: 90 [sex not indicated in publication] (lectotype: ♂, designated here, Spask [Spasskoe, Orenburg Prov., Russia] Evm. // Lectotypus, ♂, *Epeolus fasciatus* Eversmann, 1852, design. Proshchalykin & Astafurova, 2019; IZKP).

CURRENT STATUS. A junior synonym of *Biastes brevicornis* (Panzer, 1798) (Popov 1933: 54).

DISTRIBUTION. Russia: North Caucasus, Crimea, European part, Ural; Europe, Armenia, Azerbaijan, Turkey, Syria, Iran, Kazakhstan.

REMARK. The species was described from the specimens without sex definition collected in “in promontorii Uralensis”. There is only one male in IZKP from this locality (“Spask” [Orenburg Prov., Spasskoe]), which corresponds to the original description of Eversmann. This male is designated here as a lectotype of *Pasites fasciata* Eversmann (Fig. 7).

***Pasites schottii* Eversmann, 1852**

Pasites schottii Eversmann, 1852: 89, ♂ (lectotype: ♂, designated here, Spask [Spasskoe, Orenburg Prov., Russia], Jul. // *Pasites Schottii* // Lectotypus, ♂, *Pasites schottii* Eversmann, 1852, design. Proshchalykin & Astafurova, 2019; IZKP).

CURRENT STATUS. A junior synonym of *Pasites maculatus* Jurine, 1807 (Warncke 1983: 292).

DISTRIBUTION. Russia: North Caucasus, Crimea, European part, Ural, Eastern Siberia, Far East; Europe, North Africa, Caucasus, Turkey, Cyprus, Israel, Iraq, Iran, Afghanistan, Pakistan, Central Asia, Kazakhstan, Mongolia, China.

REMARK. The species was described from the males collected in “provinciis Casanensi et Orenburgensi”. There is only one male in IZKP from this locality (“Spask” [Orenburg Prov., Spasskoe]), which corresponds to the original description of Eversmann. This male is designated here as a lectotype of *Pasites schottii* Eversmann (Fig. 8).

***Phileremus abdominalis* Eversmann, 1852**

Phileremus abdominalis Eversmann, 1852: 88 [sex not indicated in publication] (lectotype: ♀, designated here, “Orb.” [Orenburg, Russia] // *Phileremus* n. sp. B.M. // 132 // Lectotypus, ♀, *Phileremus abdominalis* Eversmann, 1852, design. Proshchalykin & Astafurova, 2019; IZKP).

CURRENT STATUS. Valid species in the genus *Ammobatoides* Radoszkowski, 1867 according to Radoszkowski (1867)

DISTRIBUTION. Russia: Crimea, European part, Ural, Siberia; Europe, Caucasus, Turkey, Syria, Lebanon, Iran, Central Asia, Kazakhstan, China.

REMARK. The species was described from the specimens without sex definition collected in “prov. Orenburgensi, in promontoriis Uralensibus”. There are five specimens (females) in IZKP from this locality (Orenburg Prov.), which corresponds to the original description of Eversmann. One of this female is designated here as a lectotype of *Phileremus abdominalis* Eversmann (Fig. 9).

***Phileremus hirsutulus* Eversmann, 1852**

Phileremus hirsutulus Eversmann, 1852: 89 [sex not indicated in publication] (lectotype: ♂, designated here, Spask [Spasskoe, Orenburg Prov., Russia] // *Phileremus hirsutulus* Ev. // Lectotypus, ♂, *Phileremus hirsutulus* Eversmann, 1852, design. Proshchalykin & Astafurova, 2019, IZKP).

CURRENT STATUS. A junior synonym of *Ammobatoides abdominalis* (Eversmann, 1852) (Radoszkowski 1867: 82).

DISTRIBUTION. See above *Phileremus abdominalis*.

REMARK. The species was described from the specimens without sex definition collected in “in promontoriis Uralensibus australibus et in terris transuralensibus”. There is only one male in IZKP from this locality (“Spask” [Orenburg Prov., Spasskoe]), which corresponds to the original description of Eversmann. This male is designated here as a lectotype of *Phileremus hirsutulus* Eversmann (Fig. 10).

Subfamily Apinae

***Anthophora albifrons* Eversmann, 1852**

Anthophora albifrons Eversmann, 1852: 115, ♂ (lectotype: ♂, designated here, golden circle // Orb. [Orenburg, Russia] // *Anthophora albifrons* Evm. // *Helophilus albifrons* (Ev.), ♂, det. J. Banaszak 1983 // Lectotypus, ♂, *Anthophora albifrons* Eversmann, 1852, design. Proshchalykin et al., 2019; IZKP)

CURRENT STATUS. A junior synonym of *Anthophora bimaculata* (Panzer, 1798) (Brooks 1988: 561).

DISTRIBUTION. Russia: European part; Europe, Georgia, Turkey, Iran, Uzbekistan, Tajikistan, Kazakhstan, China.

REMARK. The species was described from the males collected in “in prov. Orenburgensi”. There is only one male in IZKP from this locality (Orenburg), which corresponds to the original description of Eversmann. This male is designated here as a lectotype of *Anthophora albifrons* Eversmann (Fig. 11).

***Anthophora atricilla* Eversmann, 1846**

Anthophora atricilla Eversmann, 1846: 437, ♀ (lectotype: ♀, designated here, Orb. [Orenburg, Russia] // *Megilla atricilla*, michi // Coll. Radoszkowski // *Anthophora atricilla* Everm., ♀, det. J. Banaszak 1977 // Lectotypus, ♀, *Anthophora atricilla* Eversmann, 1846, design. Proshchalykin et al., 2019; IZKP).

CURRENT STATUS. Valid species (Brooks 1988).

DISTRIBUTION. Russia: Crimea, European part; North Africa, Caucasus, Turkey, Pakistan, Turkmenistan, Tajikistan, Kazakhstan, China.

REMARK. The species was described from the females collected in “in campis Orenburgensis australibus”. There is only one female in IZKP from this locality (Orenburg), which corresponds to the original description of Eversmann. This female is designated here as a lectotype of *Anthophora atricilla* Eversmann (Fig. 12).

***Anthophora borealis* Morawitz, 1865**

Anthophora borealis Morawitz, 1865: 446–447, ♀, ♂ (lectotype: ♀, designated here, gold circle // “Petropolis (Poklonnaja Gora)” [St. Petersburg, Russia] // *borealis* Mor., male, Typ. [handwritten by F. Morawitz] // Lectotypus, ♀, *Anthophora borealis* Morawitz, 1864, design. Proshchalykin & Astafurova, 2017; ZISP).

CURRENT STATUS. Valid species (Brooks 1988).

DISTRIBUTION. Russia: European part, Ural, Siberia, Far East; Europe, Armenia, Turkey, Tajikistan, Kazakhstan, Mongolia, China.

REMARK. The species was described from the specimens of both sexes collected in “Petropolis”. There is only one male in ZISP from this locality, which corresponds to the original description of Morawitz. This male is designated here as a lectotype of *Anthophora borealis* Morawitz (Fig. 13).

***Anthophora dubia* Eversmann, 1852**

Anthophora dubia Eversmann, 1852: 114, ♀, ♂ (syntypes: ♀♀, ♂♂, “in promontoriis Uralensibus australibus et in prov. Orenburgensi australi”, IZKP).

CURRENT STATUS. Valid species (Brooks 1988).

DISTRIBUTION. Russia: North Caucasus, Ural; Armenia, Azerbaijan, Turkey, Iran, Central Asia, Kazakhstan, Mongolia, China.

REMARK. The specimens of this species collection (probably including syntypes) from the IZKP were loaned by J. Banaszak June 1, 1977 and still not return.

***Anthophora cinerea* Eversmann, 1852**

Anthophora cinerea Eversmann, 1852: 112, ♀, ♂ (syntypes: ♀♀, ♂♂, “in prov. Orenburgensi australiori, Saratov. et Astrachanensi”, IZKP).

CURRENT STATUS. A junior synonym of *Anthophora podagra* Lepeletier de Saint-Fargeau, 1841 (Brooks 1988: 540).

DISTRIBUTION. Russia: Crimea, European part, Ural; Europe, Armenia, Turkey, Iran, Turkmenistan, Tajikistan, Kazakhstan, China.

REMARK. The specimens from the IZKP collection (probably including syntypes) were loaned by J. Banaszak June 1, 1977 and still not returned.

***Anthophora deserticola* Morawitz, 1872**

Anthophora deserticola Morawitz, 1872: 48–50, ♀, ♂ (lectotype: ♂, designated here, “Astrakhan [Russia], Becker” // к. Моравица [coll. F. Morawitz] // *Anthophora deserticola* F. Morawitz, male [handwritten by F. Morawitz] // Lectotypus, ♂, *Anthophora deserticola* Morawitz, 1872, design. Proshchalykin & Astafurova, 2017; ZISP).

CURRENT STATUS. Valid species (Brooks 1988).

DISTRIBUTION. Russia: European part, Ural, Siberia; Tajikistan, Uzbekistan, Kazakhstan, Mongolia, China.

REMARK. The species was described from the specimens of both sexes collected in “gub. Astrachan”. There is only one male in ZISP from this locality, which corresponds to the original description of Morawitz. This male is designated here as a lectotype of *Anthophora deserticola* Morawitz (Fig. 14).

***Anthophora fulvipes* Eversmann, 1846**

Anthophora fulvipes Eversmann, 1846: 438, ♂, ♀ (lectotype: ♂, designated by Ponomareva 1966: 166, “Sarepta” [Volgograd, Russia], IZKP).

CURRENT STATUS. Valid species (Brooks 1988).

DISTRIBUTION. Russia: European part, Ural; Europe, Armenia, Turkey, China.

***Anthophora gracilipes* Morawitz, 1872**

Anthophora gracilipes Morawitz, 1872: 46–48, ♀, ♂ (lectotype: ♂, designated by Marikovskaya 2000: 206, “Derbent” [Dagestan Rep., Russia]; ZISP).

CURRENT STATUS. Valid species (Brooks 1988).

DISTRIBUTION. Russia: North Caucasus, south of European part; Caucasus, Iran, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, Mongolia, China.

***Anthophora hypopolia* Dours, 1869**

Anthophora hypopolia Dours, 1869: 87–88, ♀ (syntypes: ♀♀, “Province d’Orenbourg, Collection Dours” [Orenburg Prov., Russia], probably lost).

CURRENT STATUS. A junior synonym of *Anthophora cinerascens* Lepeletier de Saint-Fargeau, 1841 (Brooks 1988: 562).

DISTRIBUTION. Russia: Ural; North Africa, Israel, Pakistan, Central Asia.

***Anthophora lepida* Eversmann, 1846**

Anthophora lepida Eversmann, 1846: 439, ♀ (syntypes: ♀♀, “in campi Orenburgensis”, IZKP).

CURRENT STATUS. A junior synonym of *Anthophora ireos* (Pallas, 1773) (Ponomareva 1966: 162).

DISTRIBUTION. Russia: south of European part, Ural; Iran, Kazakhstan.

REMARK. The specimens from the IZKP collection (probably including syntypes) were loaned by J. Banaszak June 1, 1977 and still not returned.

***Anthophora mlokosewitzii* Radoszkowski, 1884**

Anthophora mlokosewitzii Radoszkowski, 1884: 24, ♀ (syntypes: ♀♀, “Dzurmut-czaj” [Dzhermut River, Dagestan Rep., Russia], IZKP).

CURRENT STATUS. A junior synonym of *Anthophora plagiata* (Illiger, 1806) (Brooks 1988: 570).

DISTRIBUTION. Russia: North Caucasus, Ural; Europe, North Africa, Georgia, Turkey, Iran, Tajikistan, Kyrgyzstan, Kazakhstan, Mongolia, China.

REMARK. Specimens from the IZKP collection (probably including syntypes) were loaned by J. Banaszak June 1, 1977 and still not returned.

***Anthophora morawitzi* Ponomareva, 1966**

Anthophora morawitzi Ponomareva, 1966 (nom. praeocc. nec Alfken, 1937): 162–164, ♀, ♂ (holotype: ♀, “Krasnoarmeisk (Sarepta)” [Volgograd, Russia], ZISP).

CURRENT STATUS. Objectively invalid name, junior homonym of *Anthophora morawitzi* Alfken, 1937, replaced by *Anthophora ponomarevae* Brooks, 1988.

DISTRIBUTION. Russia: Crimea, south of European part; Iran, Turkmenistan.

***Anthophora nigricornis* Morawitz, 1872**

Anthophora nigricornis Morawitz, 1872: 45–46, ♂ (lectotype: ♂, designated here, “Astrakan.” [Russia] // к. Моравица [coll. F. Morawitz] // *Anthophora nigricornis* Morawitz, male [handwritten by F. Morawitz] // Lectotypus, ♂, *Anthophora nigricornis* Morawitz, 1872, design. Proshchalykin & Astafurova, 2017; ZISP).

CURRENT STATUS. Valid species as *Amegilla nigricornis* (Morawitz, 1872) (Brooks 1988).

DISTRIBUTION. Russia: North Caucasus, south of European part; North Africa, Azerbaijan, Iran, Turkmenistan, Uzbekistan, Tajikistan, Mongolia, China.

REMARK. The species was described from the specimens of both sexes collected in “gubern. Astrachan”. There are three specimens (♀ and 2♂) in ZISP from this locality, which corresponds to the original description of Morawitz. One of this specimens (male) is designated here as a lectotype of *Anthophora nigricornis* Morawitz (Fig. 15).

***Anthophora pedata* Eversmann, 1852**

Anthophora pedata Eversmann, 1852: 116, ♀ (syntypes: ♀♀, “in promontoriis Uralensibus, circa Orsk, Guberiae, et in prov. Orenburg. australiore”, IZKP).

CURRENT STATUS. Valid species (Brooks 1988).

DISTRIBUTION. Russia: North Caucasus, south of European part, Ural; Azerbaijan, Turkey, Uzbekistan, Kazakhstan, China (NW).

REMARK. Specimens from the IZKP collection (probably including syntypes) were loaned by J. Banaszak June 1, 1977 and not yet retuned.

***Anthophora perplexa* Radoszkowski, 1884**

Anthophora perplexa Radoszkowski, 1884: 23–24, ♀ (holotype: ♀, “Orenbourg” [Orenburg, Russia], IZKP).

CURRENT STATUS. A junior synonym of *Anthophora crassipes* Lepeletier de Saint-Fargeau, 1841 (Friese 1909: 125).

DISTRIBUTION. Russia: Ural; Europe, North Africa, Turkey, Israel.

***Anthophora repleta* Dours, 1869**

Anthophora repleta Dours, 1869: 128, ♀ [syntypes: ♀♀, "Province d'Orenbourg. Collection Dours.", probably lost].

CURRENT STATUS. Nomen dubium. Type lost or destroyed, cannot be placed with certainty into the Anthophorini (Brooks 1988: 450).

***Anthophora rutherica* Morawitz, 1870**

Anthophora rutherica Morawitz, 1870: 305–307, ♀, ♂ (syntypes: ♀♀, ♂♂, Kazan, Orenburg, Sarepta [Volgograd, Russia], probably lost).

CURRENT STATUS. A junior synonym of *Anthophora retusa* (Linnaeus, 1758) (Brooks 1988: 571).

DISTRIBUTION. Russia: European part, Ural, Siberia, Far East; Europe, North Africa, Caucasus, Turkey, Central Asia, Mongolia, China.

REMARK. The syntypes of this species have not been found in ZISP and IZKP.

***Anthophora segnis* Eversmann, 1852**

Anthophora segnis Eversmann, 1852: 113–114, ♀, ♂ (syntypes: ♀♀, ♂♂, "in prov. Orenburg. australi, Saratoviensi et Astrachanensi", probably lost).

CURRENT STATUS. A junior synonym of *Anthophora podagra* Lepeletier de Saint-Fargeau, 1841 (Morawitz 1876: 19).

DISTRIBUTION. See above *Anthophora cinerea*.

REMARK. The syntypes of this species have not been found in ZISP and IZKP.

***Anthophora vernalis* Morawitz, 1877**

Anthophora vernalis Morawitz, 1877: 18–19, ♀, ♂ (lectotype: ♂, designated by Marikovskaya 2000: 209, "Wladikavkaz" [Vladikavkaz, North Ossetia, Russia]; ZISP).

CURRENT STATUS. Valid species (Brooks 1988).

DISTRIBUTION. Russia: North Caucasus, Ural; Israel, Uzbekistan, Kazakhstan.

***Crocisa affinis* Morawitz, 1874**

Crocisa affinis Morawitz, 1874: 183, ♀, ♂ (lectotype: ♂, designated here, gold circle // "Derbent. [Dagestan Rep., Russia] Faust." // к. Моравица [coll. F. Morawitz] // *affinis* F. Morawitz, male [handwritten by F. Morawitz] // Lectotypus, ♂, *Crocisa affinis* Morawitz, 1874, design. Proshchalykin & Astafurova, 2017; ZISP).

CURRENT STATUS. Valid species in the genus *Thyreus* Panzer, 1806 (Lieftinck 1968).

DISTRIBUTION. Russia: North Caucasus, European part, Ural; Europe, North Africa, Azerbaijan, Armenia, Turkey, Cyprus, Pakistan, Iran, Uzbekistan, Kyrgyzstan, Kazakhstan.

REMARK. The species was described from the specimens of both sexes collected in "Derbent [Dagestan Rep., Russia], Baku [Azerbaijan]". There is only one male in ZISP from this locality, which corresponds to the original description of Morawitz. This male is designated here as a lectotype of *Crocisa affinis* Morawitz (Fig. 16).

***Eucera albofasciata* Friese, 1895**

Eucera albofasciata Friese, 1895: 202–203, ♀, ♂ (syntypes: ♀♀, ♂♂, "In Europa meridionali et Russia: Sarepta [Volgograd, Russia], Caucaso, Græcia, Syria, Tinos, Rhodus", MNHU).

CURRENT STATUS. Valid species (Kuhlmann *et al.* 2019).

DISTRIBUTION. Russia: North Caucasus, Crimea, south of European part; Europe, North Africa, Azerbaijan, Turkey, Syria, Lebanon, Jordan, Israel.

***Eucera asiatica* Alfken, 1936**

Eucera asiatica Alfken, 1936: 10, 12, ♀, ♂ (key) (holotype: ♀, “Armavir am Kuban” [Armavir, Krasnodar Terr., Russia], MNHU).

CURRENT STATUS. A junior synonym of *Eucera taurica* Morawitz, 1870 (Sitdikov & Pesenko 1988: 85).

DISTRIBUTION. Russia: North Caucasus, Crimea, European part; Europe, North Africa, Iran, China.

***Eucera caspica* Morawitz, 1874**

Eucera caspica Morawitz, 1874: 145–147, ♀, ♂ (lectotype: ♂, designated here, “Derbent. [Dagestan Rep., Russia] Becker” // к. Моравица [coll. F. Morawitz] // *caspica* F. Mor., male [handwritten by F. Morawitz] // Lectotypus, ♂, *Eucera caspica* Morawitz, design. Sitdikov, 1987; ZISP).

CURRENT STATUS. Valid species (Levchenko *et al.* 2017a).

DISTRIBUTION. Russia: North Caucasus, Crimea, European part; Europe, Azerbaijan, Turkey.

REMARK. The species was described from the specimens of both sexes collected in “Derbent”. There are four specimens (♀ and 3 ♂) in ZISP from this locality, which corresponds to the original description of Morawitz. One of this specimens (male) is designated here as a lectotype of *Eucera caspica* Morawitz (Fig. 17).

***Eucera caspica pallida* Kerenskij, 1919**

Eucera caspica var. *pallida* Kerenskij, 1919: 51 [sex not indicated in publication] (type locality: Rostov-on-Don, Russia, probably lost).

CURRENT STATUS. A junior synonym of *Eucera caspica* Morawitz, 1874 (Tkalcū 1984: 70).

DISTRIBUTION. See above *Eucera caspica*.

***Eucera caucasica* Morawitz, 1874**

Eucera caucasica Morawitz, 1874: 147–148, ♀ (lectotype: ♀, designated by Sitdikov 1988: 108, Derbent [Dagestan Rep., Russia], MNHU).

CURRENT STATUS. A junior synonym of *Eucera nigrifacies* Lepeletier de Saint-Fargeau, 1841 (Sitdikov 1988: 108).

DISTRIBUTION. Russia: North Caucasus, Crimea, south of European part, Western Siberia; Europe, North Africa, Georgia, Azerbaijan, Turkey, Syria, Israel, Jordan, Iran, Uzbekistan, Tajikistan, Kazakhstan.

***Eucera cineraria* Eversmann, 1852**

Eucera [sic!] *cineraria* Eversmann, 1852: 120, ♂, nec ♀ (lectotype: ♂, designated by Tkalcū 1984: 74, Sarepta [Volgograd, Russia], ZISP).

CURRENT STATUS. Valid species (Levchenko *et al.* 2017a).

DISTRIBUTION. Russia: Crimea, North Caucasus, south of European part; Europe, Caucasus, Turkey, Iran, Afghanistan, China.

***Eucera coarctata* Eversmann, 1852**

Eucera coarctata Eversmann, 1852: 119–120, ♀, ♂ (lectotype: ♀, designated by Tkalců 1978: 163, “Oren.” [Orenburg, Russia], ZISP).

CURRENT STATUS. A junior synonym of *Eucera clypeata* Erichson, 1835 (Tkalců 1978: 163).

DISTRIBUTION. Russia: Crimea, North Caucasus, European part, Ural, Western Siberia; Europe, North Africa, Georgia, Azerbaijan, Turkey, Syria, Israel, Palestine, Jordan, Iraq, Iran, Afghanistan, Pakistan, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan.

***Eucera paraclypeata* Situdikov, 1988**

Eucera paraclypeata Situdikov in Situdikov & Pesenko, 1988: 97, ♂ (holotype: ♂, Dagestan Rep., Petrovsk (Makhachkala), Tarki-Tau Mt., 30.IV.1926, M. Ryabov, ZISP).

CURRENT STATUS. Valid species (Situdikov & Pesenko 1988).

DISTRIBUTION. Russia: Crimea, North Caucasus; Europe, Turkey, Syria, Israel, Jordan.

***Eucera taurica* Morawitz, 1870**

Eucera taurica Morawitz, 1870: 311–312, ♀ (syntypes: ♀♀, “Tauria” [Crimea, Russia], probably lost).

CURRENT STATUS. Valid species (Situdikov & Pesenko 1988).

DISTRIBUTION. Russia: North Caucasus, Crimea, European part; Europe, North Africa, Iran, China.

REMARK. The syntypes of this species have not been found in ZISP and IZKP.

***Eucera viciniformis* Kerenskij, 1919**

Eucera viciniformis Kerenskij, 1919: 50–51, ♀, ♂ (syntypes: ♀♀, ♂♂, Rostov-on-Don, Russia, probably lost).

CURRENT STATUS. Nomen dubium (Levchenko *et al.* 2017a).

REMARK. The type material of this taxon is untraceable and the description too poor for an unequivocal recognition.

***Macrocera graja* Eversmann, 1852**

Macrocera graja Eversmann, 1852: 124, ♂ (syntypes: ♂♂, “in provincia Orenburgensi australi”, probably lost).

CURRENT STATUS. Valid species in the genus *Tetraloniella* Ashmead, 1899 (Levchenko *et al.* 2017a).

DISTRIBUTION. Russia: North Caucasus, Crimea, European part, Ural; Europe, Azerbaijan, Turkey, Syria, Iran, Kazakhstan.

REMARK. The syntypes of this species have not been found in ZISP and IZKP. But in IZKP there is one male of “*Macrocera graja*” collected in “Kef.” [Kefalonia Island, Greece] from collection of Herrich-Schaeffer which refers to another species (Baker 1996).

***Macrocera mediocris* Eversmann, 1852**

Macrocera mediocris Eversmann, 1852: 122, ♀, ♂ (lectotype: ♀, designated here, golden circle // 3. // “Spask., Jul.” [Spasskoe, Orenburg Prov., Russia] // *Macrocera mediocris* Evm., ♀// Lectotypus, ♀, *Macrocera mediocris* Eversmann, 1852, design. Proshchalykin & Astafurova, 2018; IZKP).

CURRENT STATUS. A junior synonym of *Tetraloniella pollinosa* (Lepeletier de Saint-Fargeau, 1841) (Dalla Torre 1896: 244).

DISTRIBUTION. Russia: North Caucasus, European part, Ural; Europe, North Africa, Georgia, Armenia.

REMARK. The species was described from the specimens of both sexes collected in “in promontorii Uralensis australibus”. There are four specimens (♀ and 3 ♂) in IZKP from this locality, which corresponds to the original description of Eversmann. One of this specimens (female) is designated here as a lectotype of *Macroceras mediocris* Eversmann (Fig. 18).

***Melecta eversmanni* Radoszkowski, 1893**

Melecta eversmanni Radoszkowski, 1893: 180, ♀, ♂ (lectotype: ♂, designated here, golden circle // “Ornb.” [Orenburg, Russia] // Lectotypus, ♂, *Melecta eversmanni* Radoszkowski, 1893, design. Proshchalykin et al., 2019; IZKP).

CURRENT STATUS. Valid species (Lieftinck 1980).

DISTRIBUTION. Russia: south of European part, Ural; Uzbekistan.

REMARK. The species was described from the specimens of both sexes collected in “Orenbourg, Astrakhan (Ryn-Peski), Tachkend”. There are four specimens in IZKP from this locality (2 ♂ from Orenburg, ♀ from Astrakhan, and ♀ from Tachkend), which corresponds to the original description of Eversmann. One of this specimens (male) is designated here as a lectotype of *Melecta eversmanni* Radoszkowski (Fig. 19).

***Melecta fasciculata* Fischer de Waldheim, 1843**

Melecta fasciculata Fischer de Waldheim, 1843 (nec Spinola, 1806): 3, [sex not indicated in publication] (type locality: “ad Ural fluvium superiorem” [Orenburg Prov. or Bashkortostan Rep., Russia], syntypes probably lost).

CURRENT STATUS. A junior synonym of *Melecta luctuosa* (Scopoli, 1770) (Lieftinck 1980: 227).

DISTRIBUTION. Russia: North Caucasus, Crimea, European part, Ural, Siberia, Far East; Europe, North Africa, Caucasus, Turkey, Cyprus, Lebanon, Israel, Jordan, Iraq, Iran, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan.

***Melecta jakovlewii* Radoszkowski, 1877**

Melecta jakovlewii Radoszkowski, 1877: 333, ♂ (holotype: ♂, Astrakhan, MNHU).

CURRENT STATUS. Junior synonym of *Melecta duodecimmaculata* (Rossi, 1790) (Lieftinck 1980: 215).

DISTRIBUTION. Russia: Crimea, south of European part; Europe, North Africa, Turkey, Iraq, Iran, Central Asia, Kazakhstan, China.

***Melecta quatuordecimpunctata* Fischer de Waldheim, 1843**

Melecta quatuordecimpunctata Fischer de Waldheim, 1843: 4, ♂ (syntypes: “ad Ural fluvium superiorem” [Orenburg Prov. or Bashkortostan Rep., Russia], probably lost).

CURRENT STATUS. A junior synonym of *Melecta duodecimmaculata* (Rossi, 1790) (Lieftinck 1980: 210).

DISTRIBUTION. See above *Melecta jakovlewii*.

***Podalirius cincreus* Friese, 1896**

Podalirius cincreus Friese, 1896a: 63, ♀ (lectotype: ♀, designated by Schwarz & Gusenleitner 2001: 63, "Sarepta" [Volgograd, Russia], MNHU).

CURRENT STATUS. Valid species in the genus *Anthophora* Latreille, 1803 (Brooks 1988).

DISTRIBUTION. Russia: North Caucasus, south of the European part, Ural; Caucasus, Kazakhstan, Turkmenistan.

***Podalirius retusus sareptanus* Friese, 1896**

Podalirius retusus var. *sareptanus* Friese, 1896a: 266, ♀ (holotype: ♀, Sarepta [Volgograd, Russia], MNHU].

CURRENT STATUS. A junior synonym of *Anthophora retusa* (Linnaeus, 1758) (Brooks 1988: 571).

DISTRIBUTION. See above *Anthophora ruthenica*.

***Pseudomelecta baerii* Radoszkowski, 1865**

Pseudomelecta baerii Radoszkowski, 1865: 56, ♀ (lectotype: ♀, designated by Lieftinck 1980: 282, "Cauca. Młokos." [Caucasus, probably Kakheti in Georgia or Dagestan in Russia, collected by L.A. Młokosiewicz], IZKP).

CURRENT STATUS. Valid species (Lieftinck 1980).

DISTRIBUTION. Russia: Ural, Western Siberia; Caucasus, Turkmenistan.

REMARK. Record for Kazakhstan (Levchenko *et al.*, 2017a) is erroneous.

***Saropoda fulva* Eversmann, 1852**

Saropoda fulva Eversmann, 1852: 105 [sex not indicated in publication] (lectotype: ♂, designated here, "Kas. [Kazan, Tatarstan Rep., Russia], 8.VI" // Lectotypus, ♂, *Saropoda fulva* Eversmann, 1852, design. Proshchalykin & Astafurova, 2019; IZKP).

CURRENT STATUS. A junior synonym of *Epeoloides coecutiens* (Fabricius, 1775) (Morawitz 1872: 63).

DISTRIBUTION. Russia: Crimea, European part; Ural, Siberia; Europe, Kazakhstan.

REMARK. The species was described from the specimens without sex definition collected in "Cepi in provincia Casanensi". There is only one male in IZKP from this locality ("Kas." [Kazan, Tatarstan Rep.]), which corresponds to the original description of Eversmann. This male is designated here as a lectotype of *Saropoda fulva* Eversmann (Fig. 20).

***Tetralonia basalis* Morawitz, 1870**

Tetralonia basalis Morawitz, 1870: 313–314, ♂ (lectotype: ♂, designated here, "Kasan. [Kazan, Tatarstan Rep., Russia] Ballion" // к. Моравица [coll. F. Morawitz] // *Tetralonia basalis* F. Moraw., male [handwritten by F. Morawitz] // syntypus *Tetralonia basalis* F. Mor., male // Lectotypus, ♂, *Tetralonia basalis* Morawitz, 1870, design. Proshchalykin & Astafurova, 2017; ZISP).

CURRENT STATUS. A junior synonym of *Tetraloniella salicariae* (Lepeletier de Saint-Fargeau, 1841) (Levchenko *et al.* 2017a: 322).

DISTRIBUTION. Russia: North Caucasus, European part, Ural; Europe, North Africa, Caucasus, Uzbekistan, Kazakhstan.

REMARK. The species was described from the males collected in “Bei Kasan”. There is only one male in ZISP from this locality, which corresponds to the original description of Morawitz. This male is designated here as a lectotype of *Tetralonia basalis* Morawitz (Fig. 21).

Tkalcū designated (but not published) a male from “Derbent” in the collection of ZISP as lectotype. This locality is not mentioned in the original description, so this designation is invalid.

***Tetralonia fossulata* Morawitz, 1874**

Tetralonia fossulata Morawitz, 1874: 142–143, ♂ (syntypes: ♂♂, “Derbent” [Dagestan Rep., Russia], probably lost).

CURRENT STATUS. A junior synonym of *Tetraloniella pollinosa* (Lepeletier de Saint-Fargeau, 1841) (Friese 1896b: 72).

DISTRIBUTION. Russia: North Caucasus, European part, Ural; Europe, North Africa, Georgia, Armenia.

REMARK. The syntypes of this species have not been found in ZISP and IZKP.

***Tetralonia nana* Morawitz, 1874**

Tetralonia nana Morawitz, 1874: 144–145, ♀, ♂ (lectotype: ♂, designated here, “Derbent.” [Dagestan Rep., Russia] // к. Моравица [coll. F. Morawitz] // *Tetralonia nana* Mor. [handwritten by F. Morawitz] // Lectotypus, ♂, *Tetralonia nana* Mor., design. Radchenko; ZISP).

CURRENT STATUS. Valid species in the genus *Tetraloniella* Ashmead, 1899 (Grace 2010).

DISTRIBUTION. Russia: North Caucasus, European part, Ural; Europe, Azerbaijan, Turkmenistan, Kazakhstan.

REMARK. The species was described from the specimens of both sexes collected in “Derbent”. There is only one male in ZISP from this locality, which corresponds to the original description of Morawitz. This male is designated here as a lectotype of *Tetralonia nana* Morawitz (Fig. 22).

***Tetralonia nigriventris* Alfken, 1931**

Tetralonia nigriventris Alfken, 1931: 111–112, ♀, ♂ [holotype: ♀, "Distr. Armavir, Gulkovitschi, St. Selek. Exp. N. Tellgulskaja" [Gulkevichi, Krasnodar Terr., Russia], probably lost].

CURRENT STATUS. Nomen dubium (Levchenko *et al.*, 2017b).

REMARK. Type specimens are possible lost. According to brief description, this species belongs to the subgenus *Synhalonia* Patton, 1879 of the genus *Eucera* Scopoli, 1770.

***Tetralonia radoszkowskyi* Morawitz, 1872**

Tetralonia radoszkowskyi Morawitz, 1872: 50–52, ♀, ♂ (lectotype: ♂, designated here, “Sarepta.” [Volgograd, Russia] // к. Моравица [coll. F. Morawitz] // *Tetralonia radoszkowskyi* Mor. [handwritten by F. Morawitz], female, male // Lectotypus, ♂, *Tetralonia radoszkowskyi* Morawitz, 1872, design. Proshchalykin & Astafurova, 2017; ZISP).

CURRENT STATUS. A junior synonym of *Eucera alborufa* (Radoszkowski, 1871) (Augul 2018: 61).

DISTRIBUTION. Russia: European part; North Africa, Azerbaijan, Iran, Turkmenistan, Uzbekistan, Kazakhstan.

REMARK. The species was described from the specimens of both sexes collected in “Gubern. Saratov” [Volgograd Prov.]. There are three specimens (2 ♀ and ♂) in ZISP from this locality, which corresponds to the original description of Morawitz. One of this specimens (male) is designated here as a lectotype of *Tetralonia radoszkowskyi* Morawitz (Fig. 23).

***Tetralonia velutina* Morawitz, 1874**

Tetralonia velutina Morawitz, 1874: 139–140, ♀, ♂ (lectotype: ♂, designated here, “Derbent [Dagestan Rep., Russia] Becker.” // к. Моравица [coll. F. Morawitz] // syntypus *Tetralonia velutina* Mor. // Lectotypus, ♂, *Tetralonia velutina* Mor., Tkalcū det. // Lectotypus; ZISP).

CURRENT STATUS. Valid species in the genus *Eucera* Scopoli, 1770 (Grace 2010).

DISTRIBUTION. Russia: North Caucasus, south of European part, Ural; Turkey, Israel.

REMARK. The species was described from the specimens of both sexes collected in “Derbent”. There are three specimens (2 ♀ and ♂) in ZISP from this locality, which corresponds to the original description of Morawitz. One of this specimens (male) is designated here as a lectotype of *Tetralonia velutina* Morawitz (Fig. 24).

ACKNOWLEDGEMENTS

We thank curators of the Hymenoptera collections M. Ohl and V. Richter (MNHU), and L. Przybylowicz (IZKP). We are grateful to A. Lelej (Federal Scientific Center of the East Asia Terrestrial Biodiversity, Vladivostok, Russia) for comments and suggestions that helped to improve this paper.

The work was supported by the Russian Funds for Basic Research (grant numbers 17-04-00259; 18-54-00011_Бел_a; 19-04-00027), and the state research project AAAA-A17-117030310210-3 and the Presidium RAS program no.41 “Biodiversity of natural systems and biological sources of Russia”.

REFERENCES

- Alexander, B.A. & Schwarz, M. 1994. A catalog of the species of *Nomada* (Hymenoptera: Apoidea) of the world. *The University of Kansas Science Bulletin*, 55: 239–270.
- Alfken, J.D. 1913. Die Bienenfauna von Ostpreussen. *Schriften der Physikalische-ökonomischen Gesellschaft zu Königsberg*, 53: 114–182.
- Alfken, J.D. 1924. Beitrag zur Kenntnis einiger Bienen Finnlands. *Notulae Entomologicae*, 4: 33–40.
- Alfken, J.D. 1931. Eine neue paläarktische *Tetralonia*-Art. (Apid. Hym.). *Mitteilungen der Münchner Entomologischen Gesellschaft*, 2: 111–112.
- Alfken, J.D. 1936. Beitrag zur Kenntnis der *Eucera hispana* Lep. (Hym. Apid.). *Deutsche Entomologische Zeitschrift*, 1936: 1–13.
- Ascher, J.S. & Pickering, J. 2019. Discover Life: bee species guide and world checklist (Hymenoptera: Apoidea: Anthophila). http://www.discoverlife.org/mp/20q?guide=Apoidea_species (accessed 22 November 2019)
- Augul, R.S. 2018. Study on diversity of bees (Hymenoptera, Apoidea) from different regions of Iraq. *Bulletin of the Iraq Natural History Museum*, 15(1): 57–75. DOI: <https://doi.org/10.26842/binhm.7.2018.15.1.0057>

- Baer, J. 1853. Dasypodae Rossicae in districtu Romen gubernii Poltavici captae, descriptae et iconae illustratae. *Bulletin de la Société Impériale Naturalistes de Moscou*, 26(1/1): 69–73.
- Baker, D.B. 1996. Hymenoptera collections of Boyer de Fonscolombe: Apoidea in the University Museum, Oxford. *Journal of Natural History*, 30: 537–550.
- Bischoff, H. 1930. Beitrag zur Kenntnis paläarktischer Artender Gattung *Epeolus*. (Hym. Apid.). *Deutsche Entomologische Zeitschrift*, 1: 1–15.
- Bogusch, P. & Hadrava, J. 2018. European bees of the genera *Epeolus* Latreille, 1802 and *Triepeolus* Robertson, 1901 (Hymenoptera: Apidae: Nomadinae: Epeolini): taxonomy, identification key, distribution, and ecology. *Zootaxa*, 4437(1): 1–60. DOI: <https://doi.org/10.11646/zootaxa.4437.1.1>
- Brooks, R.W. 1988. Systematics and phylogeny of the Anthophorine bees (Hymenoptera: Anthophoridae; Anthophorini). *The University of Kansas Bulletin*, 53(9): 436–575.
- Dalla Torre, K.W. 1891. Die Gattungen und Arten der Phileremiden. *Bericht des Naturwissenschaftlich-Medizinischen Vereins in Innsbruck*, 19: 137–159.
- Dalla Torre, C.G. de. 1896. *Catalogus hymenopterorum hucusque descriptorum systematicus et synonymicus. Vol. X. Apidae (Anthophila)*. Lipsiae: G. Engelmann. VIII, 643 pp.
- Dours, J.A. 1869. Monographie iconographique du genre *Anthophora* Latr. *Membre Titulaire de la Société Linnéenne du Nord de la France*, 2: 5–211.
- Eversmann, E. 1846. Hymenopterorum rossicorum species novae vel parum cognitae, descriptae et ex parte depictae. *Bulletin de la Société Impériale Naturalistes de Moscou*, 19(1/2): 436–443.
- Eversmann, E. 1852. Fauna hymenopterologica volgo-uralensis (Continuatio). *Bulletin de la Société Impériale Naturalistes de Moscou*, 25(3): 1–137.
- Fischer de Waldheim, G. 1843. Observata quaedam de Hymenopteris Rossicis. *Guérin Magasin de Zoologie*, 5: 1–4.
- Friese, H. 1895. Species aliquot novae vel minus cognitae generum *Eucera* Scop. et *Meliturga* Latr. *Természetrájzi Füzetek*, 18: 202–209.
- Friese, H. 1896a. Species aliquot novae vel minus cognitae generis *Podalirius* Latr. (*Anthophora* auct.). *Természetrájzi Füzetek*, 19: 265–269.
- Friese, H. 1896b. Die Bienen Europa's (Apidae europaea) nach ihren Gattungen, Arten und Varietäten auf vergleichend morphologisch-biologischer Grundlage. Theil II: Solitäre Apiden. Genus *Eucera* R. Friedländer, Berlin. 216 p.
- Friese, H. 1901. Die Bienen Europa's (Apidae europaea) nach ihren Gattungen, Arten und Varietäten auf vergleichend morphologisch-biologischer Grundlage. Theil VI: Solitäre Apiden: Subfam. *Panurginae*, *Melittinae*, *Xylocopinae* C. Lampe, Innsbruck und Imst, 284 pp.
- Friese, H. 1921. Neue Arten der Schmarotzerbienen. *Deutsche Entomologische Zeitschrift*, 1920: 251–266.
- Friese, H. 1925. Neue Formen von Schmarotzerbienen, besonders aus dem paläarktischen Gebiet. *Konowia: Zeitschrift für systematische Insektenkunde*, 4: 27–42.
- Grace, A. 2010. *Introductory Biogeography to Bees of the Eastern Mediterranean and Near East*. Sussex: Bexhill Museum, 284 p.
- International Commission on Zoological Nomenclature (ICZN). 1999. *International Code of Zoological Nomenclature. Fourth Edition*. ITZN, London. i–xxx + 1–306.
- Kerenskij, I.P. 1919. *Eucera* (Hymenoptera, Apidae) from the environs of Rostov-on-Don. *Protokoly Zasedaniy Obshchestva Estestvoispytateley pri Donskom Universitete*, 2(1): 46–56. [In Russian]

- Kuhlmann, M., Ascher, J.S., Dathe, H.H. Ebmer, A.W., Hartmann, P., Michez, D., Müller, A., Patiny, S., Pauly, A., Praz, C., Rasmont, P., Risch, S., Scheuchl, E., Schwarz, M., Terzo, M., Williams, P.H., Amiet, F., Baldock, D., Berg, Ø., Bogusch, P., Calabuig, I., Cederberg, B., Gogala, A., Guseleinertner, F., Josan, Z., Madsen, H.B., Nilsson, A., Ødegaard, F., Ortiz-Sánchez, J., Paukkunen, J., Pawlikowski, T., Quaranta, M., Roberts, S.P.M., Sáropataki, M., Schwenninger, H.-R., Smit, J., Söderman, G. & Tomozei B. 2019. Checklist of the Western Palaearctic Bees (Hymenoptera: Apoidea: Anthophila). <http://westpalbees.myspecies.info> (accessed 22 November 2019).
- Levchenko, T.V., Byvaltsev, A.M. & Proshchalykin, M.Yu. 2017a. Family Apidae. P. 309–332. In: Lelej, A.S., Proshchalykin, M.Yu. & Loktionov V.M. (Eds). *Annotated Catalogue of the Hymenoptera of Russia. Vol. I. Symphyta and Apocrita: Aculeata*. St. Petersburg. (*Proceedings of the Zoological Institute of the RAS, Suppl. 6*). 475 pp.
- Levchenko, T.V., Schwarz, M. & Byvaltsev, A.M. 2017b. New data and corrections to the fauna of bees of the family Apidae (Hymenoptera) of Russia. *Proceedings of the Russian Entomological Society*, 88(2): 91–109.
- Lieftinck, M.A. 1968. A review of Old World species of *Thyreus* Panzer (= *Crocisa* Jurine) Part 4. Palearctic species. *Zoologische Verhandelingen*, 98: 3–139.
- Lieftinck, M.A. 1980. Prodrome to a monograph of the Palaearctic species of the genus *Melecta* Latreille 1802 (Hymenoptera, Anthophoridae). *Tijdschrift voor Entomologie*, 123(6): 129–349.
- Łoziński, P. 1922. Eine kritische Bearbeitung der *Nomada*-Arten aus der Sammlung von O. Radoszkowski. *Bulletin de l'Academie Polonaise des Sciences et des Letters, Ser. B: Sciences Naturelles*, 1921: 87–120.
- Marikovskaya, T.P. 2000. The type specimens of the species from the genus *Anthophora* Latreille, s.l. (Hymenoptera, Apoidea) deposited in the collection of Zoological Institute RAS. *Tethys, Entomological Research*, 2: 205–210. [In Russian]
- Michener, C.D. 2007. *The Bees of the World [2nd Edition]*. Baltimore: Johns Hopkins University Press. xvi+[i]+953 p. + 20 pls.
- Michez, D., Kuhlmann, M., Ivanov, S.P. & Radchenko, V.G. 2012. Description of four new species in the bee genus *Melitta* Kirby, 1802 (Hymenoptera: Melittidae). *Zootaxa*, 3337: 57–67.
- Michez, D., Terzo, M. & Rasmont, P. 2004. Révision des espèces ouest-paléarctiques du genre *Dasypoda* Latreille 1802 (Hymenoptera, Apoidea, Melittidae). *Linzer biologische Beiträge*, 36(2): 847–900.
- Mocsáry, A. & Szépligeti, V. 1901. Hymenopteren. In: Horváth, G. (Ed.). *Dritte asiatische Forschungsreise des Grafen Eugen Zichy. Band II. Zoologische Ergebnisse der dritten asiatischen Forschungsreise des Grafen Eugen Zichy*, Budapest/Leipzig, 121–169 pp.
- Morawitz, F. 1865. Ueber *Vespa austriaca* Panzer und drei neue Bienen. *Bulletin de la Société Impériale Naturalistes de Moscou*, 37(2/4): 439–449.
- Morawitz, F. 1870. Beitrag zur Bienenfauna Russlands. *Horae Societatis Entomologicae Rossicae*, 7(2/3): 305–320.
- Morawitz, F. 1871. Beitrag zur Bienenfauna Russlands. *Horae Societatis Entomologicae Rossicae*, 7(4): 321–333.
- Morawitz, F. 1872. Neue suedrussische Bienen. *Horae Societatis Entomologicae Rossicae*, 9(1): 45–62.
- Morawitz, F. 1874. Die Bienen Dagestans. *Horae Societatis Entomologicae Rossicae*, 10(2/4): 129–189.
- Morawitz, F.F. 1876. Zur Bienenfauna der Caucasusländer. *Horae Societatis Entomologicae Rossicae*, 12(1): 3–69.

- Morawitz, F.F. 1877. Nachtragung zur Bienenfauna Caucasiens. *Horae Societatis Entomologicae Rossicae*, 14(1): 3–112.
- Nilsson, L.A. 2007. The type material of Swedish bees (Hymenoptera, Apoidea) I. *Entomologisk Tidskrift*, 128: 167–181.
- Nylander, W. 1848. Adnotationes in expositionem monographicam apum borealium. *Notiser ur Sällskapets pro Fauna et Flora Fennica Forhandlingar*, 1: 165–282, pl. III.
- Ponomareva, A.A. 1966. On some little-known species of the genus *Anthophora* s. l. (Hymenoptera, Apoidea) from the USSR. *Entomologicheskoe Obozrenie*, 45(1): 155–167. [In Russian]
- Popov, V.B. 1933. Notes on the parasitic bees allied to the genus *Biastes* Panz. (Hymenoptera, Nomadidae). *Trudy Zoologicheskogo Instituta Akademii Nauk SSSR*, 2(1): 51–75. [In Russian]
- Proshchalykin, M.Yu. 2014a. The species-group names of bees (Hymenoptera: Apoidea, Apiformes) described from the Russian Far East. Part I. Families Colletidae, Andrenidae and Melittidae. *Euroasian entomological journal*, 13(5): 481–488.
- Proshchalykin, M.Yu. 2014b. The species-group names of bees (Hymenoptera: Apoidea, Apiformes) described from the Russian Far East. Part II. Families Halictidae, Megachilidae and Apidae. *Euroasian entomological journal*, 13(6): 527–534.
- Proshchalykin, M.Yu. & Astafurova, Yu.V. 2016. The species-group names of bees (Hymenoptera: Apoidea, Apiformes) described from Crimea, North Caucasus, European part of Russia and Ural. Part I. Families Colletidae and Halictidae. *Far Eastern Entomologist*, 312: 1–20.
- Proshchalykin, M.Yu. & Astafurova, Yu.V. 2017. Family Melittidae. P. 293–294. In: Lelej, A.S., Proshchalykin, M.Yu. & Loktionov V.M. (Eds). *Annotated Catalogue of the Hymenoptera of Russia. Vol. I. Symphyta and Apocrita: Aculeata*. St. Petersburg. (*Proceedings of the Zoological Institute of the RAS, Suppl. 6*). 475 pp.
- Proshchalykin, M.Yu., Astafurova, Yu.V. & Osytshnjuk, A.Z. 2017. The species-group names of bees (Hymenoptera: Apoidea, Apiformes) described from Crimea, North Caucasus, European part of Russia and Ural. Part II. Families Andrenidae and Megachilidae. *Far Eastern Entomologist*, 328: 1–34.
- Proshchalykin, M.Yu. & Lelej, A.S. 2010. Review of the *Nomada roberjeotiana* species-group (Hymenoptera: Apidae) of Russia, with description of new species. *Zootaxa*, 2335: 1–15.
- Proshchalykin, M.Yu. & Lelej, A.S. 2013. The species-group names of bees (Hymenoptera: Apoidea, Apiformes) described from Siberia. *Euroasian entomological journal*, 12(4): 315–327.
- Proshchalykin, M.Yu. & Lelej, A.S. 2014. Review of the genus *Ammobatoides* Radoszkowski, 1867 (Hymenoptera: Apidae, Nomadinae) from Russia and neighbouring countries. *Zootaxa*, 3852(4): 445–460. DOI: <http://dx.doi.org/10.11646/zootaxa.3852.4.3>
- Proshchalykin, M.Yu. & Müller, A. 2019. Additional records of osmiine bees (Hymenoptera: Megachilidae: Osmiini) from Siberia. *Zootaxa*, 4563(1): 163–174. DOI: <https://doi.org/10.11646/zootaxa.4563.1.9>
- Radchenko, V.G. 2016. A new widespread European bee species of the genus *Dasypoda* Latreille (Hymenoptera, Apoidea). *Zootaxa*, 4184(3): 491–504. DOI: <http://doi.org/10.11646/zootaxa.4184.3.4>
- Radchenko, V.G. & Pesenko, Yu.A. 1989. A key to bees of the genus *Dasypoda* Latreille (Hymenoptera, Melittidae) of the European part of the USSR, with designation of lectotypes. *Trudy Zoologicheskogo Instituta Akademii Nauk SSSR*, 188: 114–121. [In Russian]

- Radoszkowski, O. 1865. Description d'un genre nouveaux *Pseudomelecta* et de quelques espèces du genre *Eumenes*. *Horae Societatis Entomologicae Rossicae*, 3(1): 53–60.
- Radoszkowski, O. 1867. Matériaux pour servir à l'étude des insectes de la Russie. IV. Notes sur quelques Hyménoptères de la tribu des Apides. *Horae Societatis Entomologicae Rossicae*, 5(3):73–90.
- Radoszkowski, O. 1877. Matériaux pour servir à une faune hyménoptérologique de la Russie. (Suite). *Horae Societatis Entomologicae Rossicae*, 12(4): 333–355.
- Radoszkowski, O. 1884. Études hyménoptérologiques. *Horae Societatis Entomologicae Rossicae*, 18(1/2): 23–29.
- Radoszkowski, O. 1888. Études hyménoptérologiques. I. Revision des armures copulatrices des mâles. II. Description de nouvelles espèces russes. *Horae Societatis Entomologicae Rossicae*, 22(3/4): 315–337.
- Radoszkowski, O. 1893. Revue des armures copulatrices des mâles des genres *Crocisa* Jur., *Melecta* Latr., *Pseudomelecta* Rad., *Chrysantheda* Pert., *Mesocheira* Lep., *Aglae* Lep., *Melissa* Smit, *Euglossa* Lat., *Eulema* Lep., *Acanthopus* Klug. *Bulletin de la Société Impériale Naturalistes de Moscou*, 7(2/3): 163–190.
- Rightmyer, M.G. 2008. A review of the cleptoparasitic bee genus *Triepeolus* (Hymenoptera: Apidae). Part I. *Zootaxa*, 1710: 1–170.
- Schmiedeknecht, O. 1882. *Apidae Europaeae (Die Bienen Europas) per genera, species et varietates dispositae atque descriptae. Tomus I. Nomada, Bombus, Psithyrus et Andrena*. Gumperda & Berlin, 866 pp.
- Schwarz, M. 1967. Die Gruppe der *Nomada cinetiventris* Fr. (= *stigma* auct. nec F.) (Hymenoptera, Apoidea). *Polskie Pismo entomologiczne*, 37(2): 263–339.
- Schwarz, M. 1980. Zur Kenntnis einiger von F. Morawitz beschriebener *Nomada*-Arten (Hymenoptera, Apoidea). *Entomofauna*, 1: 1–27.
- Schwarz, M. 1986. Revision der *Nomada*-Arten der Sammlung C.G. Thomson (Hymenoptera, Apoidea). *Entomofauna*, 7: 469–484.
- Schwarz, M. 1987. Beitrag zur Klärung einiger von F. Morawitz beschriebener *Nomada*-Arten. *Entomofauna*, 8: 237–247.
- Schwarz, M. & Gusenleitner, F.J. 2001. Beitrag zur Kenntnis paläarktischer Anthophorini und Habropodini (Hymenoptera: Apidae). *Entomofauna*, 22: 53–90.
- Schwarz, M. & Gusenleitner, F.J. 2015. Über den Verbleib der von Schmiedeknecht 1882 beschriebenen *Nomada*-Arten und Festlegung von Lectotypen der aufgefundenen Arten. Mit zusätzlichen Ergänzungen und Beschreibungen zu einigen Arten (Hymenoptera, Apidae, Nomadinae). *Linzer biologische Beiträge*, 47(1): 1003–1044.
- Schwarz, M. & Gusenleitner, F.J. 2017. *Nomada pilosa* nov. sp., eine neue paläarktische Wespenbiene (Hymenoptera, Apidae). *Linzer biologische Beiträge*, 49(1): 979–983.
- Sitdikov, A.A. 1986. The fauna of bees (Hymenoptera, Apoidea) of Udmurtia, with description of *Melitta udmurtica* sp. n. *Trudy Zooogicheskogo Instituta Akademii Nauk SSSR*, 159: 103–112. [In Russian]
- Sitdikov, A.A. 1988. The taxonomy of the bee genus *Eucera* Scopoli (Hymenoptera, Anthophoridae) of the fauna of the USSR and neighbouring countries: the subgenus *Pteneucera* Tkalcù. *Trudy Zooogicheskogo Instituta Akademii Nauk SSSR*, 175: 102–111. [In Russian]
- Sitdikov, A.A. & Pesenko, Yu.A. 1988. The subgeneric classification of bees of the genus *Eucera* Scopoli (Hymenoptera, Anthophoridae), with a scheme of the phylogenetic relationships between the subgenera. *Trudy Zooogicheskogo Instituta Akademii Nauk SSSR*, 175: 75–101. [In Russian]

- Stoeckhert, E. 1941. Über die Gruppe der *Nomada zonata* Panz. (Hym. Apid.). *Mitteilungen der Munchner Entomologischen Gesellschaft*, 31: 1072–1122.
- Tkalcù, B. 1978. Beitrage zur Kenntnis der Fauna Afghanistans. *Melitturga* Latr., *Eucera* Scop., Apidae; *Lithurge* Latr., *Stelis* Pz., *Creightonella* Cockll., Megachilidae, Apoidea, Hym. *Acta Musei Moraviae*, 63: 153–181.
- Tkalcù, B. 1984. Systematisches Verzeichnis der westpaläarktischen *Tetralonia* und *Eucera* Arten, deren Männchen als Blütenbesucher verschiedener *Ophrys*-Arten festgestellt wurden. Mit Beschreibung neuer Taxa (Hymenoptera: Apoidea). *Nova Acta Regiae Societatis Scientiarum Upsaliensis*, 5(3): 57–77.
- Warncke, K. 1973. Die westpaläarktischen Arten der Bienenfamilie Melittidae (Hymenoptera). *Polskie Pismo entomologiczne*, 43: 97–126.
- Warncke, K. 1983. Zur Kenntnis der Bienengattung *Pasites* Jurine, 1807, in der Westpaläarktis (Hymenoptera, Apidae, Nomadinae). *Entomofauna*, 4(21): 261–334.

© Far Eastern entomologist (Far East. entomol.) Journal published since October 1994.

Editor-in-Chief: S.Yu. Storozhenko

Editorial Board: A.S. Lelej, S.A. Belokobylskij, M.G. Ponomarenko, E.A. Beljaev, V.A. Mutin, E.A. Makarchenko, A.V. Gorochov, T.M. Tiunova, M.Yu. Proshchalykin, S.A. Shabalin

Address: Federal Scientific Center of the East Asia Terrestrial Biodiversity (former Institute of Biology and Soil Science), Far East Branch of the Russian Academy of Sciences, 690022, Vladivostok-22, Russia.

E-mail: storozhenko@biosoil.ru

web-site: <http://www.biosoil.ru/fee>